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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,364	10/11/2001	Edwin Park	TI-31696	9521
23494 7590 07/17/2007 TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			EXAMINER CHEN, ALAN S	
			ART UNIT 2182	PAPER NUMBER
			NOTIFICATION DATE 07/17/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

09/975,364

Applicant(s)

PARK, EDWIN

Examiner

Alan S. Chen

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments based on the amendment filed 04/09/2007, with respect to claims 1-7 (*renumbered in amendment*), have been fully considered and are persuasive. The 35 USC §112 and prior art rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of US Pat. No. 6,151,390 to Volftsun et al. (*Volftsun*) and US Pat. No. 6,493,355 to Henderson et al. (*Henderson*).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-7 are rejected under 35 USC 103(a) as being unpatentable over Volftsun in view of Henderson.

5. Per claim 1, Volftsun discloses a universal interface device (*Figs. 1 and 3*) comprising a controller (*Fig. 3, element 300*); a configuration database (*Fig. 3, element 324; Column 7, lines 35-40 data manager manages the databases required for operation*) coupled to the controller (*Fig. 3, protocol conversion engine and data manager are coupled together*), a plurality of interconnection pads (*Fig. 2, element 200 embodies the hardware components in which the protocol conversion engine resides, interconnections between components all intrinsically have pads, particularly between the device and external networking components*); a memory coupled to the interconnection pads and controller (*Fig. 2, element 206*), the memory is programmable by the controller in order to support any of the different peripheral devices (*protocol conversion engine uses memory to store, swap and manipulate data*); and a multiplexer (*Fig. 2, element 220*) coupled between the memory and the plurality of interconnection pads wherein the universal interface device concurrently interfaces with the plurality of different peripheral devices (*Fig. 1, peripheral devices are the networking nodes and voice peripherals*) using time division multiplexing of the plurality of interconnection pads (*Column 6, lines 65-Column 7, lines 5, a plurality of channels are Time Division Multiplexed onto a single circuit*).

Volftsun further alludes to use of a centralized database to facility communications between nodes (*Column 32, lines 38-47*).

Volftsun does not disclose expressly that it is the configuration database storing a plurality of configuration protocols for supporting the various different peripheral devices.

Henderson discloses a data communications network for routing calls, the calls in part being routed in the form of various speech codes. A central database exists (*Fig. 3, element 306*) whereupon the database is referenced to convert from one speech code protocol to another (*Column 9, lines 55-Column 10, lines 5*).

Volftsun and Henderson are analogous art because they are from similar problem solving area in voice communication networking and the ability to interface devices operating under disparate communications protocols.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to have a central configuration database where protocols conversion schemes are stored.

The suggestion/motivation for doing so would have been the ability to add new and/or updated protocols to a central repository as needed to enable simple expansion of the existing protocol library.

6. Per claim 2, Volftsun combined with Henderson discloses claim 1, Volftsun further discloses the controller comprising a state machine (*Fig. 4, elements 410, 412 and 414 are all state machines*).

7. Per claim 3, Volftsun combined with Henderson discloses claim 1, wherein the memory, e.g., RAM requires a clock, which is intrinsically either hardware, programmed during design or software programmable.

8. Per claim 4, Volftsun combined with Henderson discloses claim 1, Volftsun further disclosing controller selecting a configuration protocol from amongst the plurality of configuration protocols (*Column 35, lines 9-22, controller converts calls to certain*

protocols as they come in), and uses the selected configuration protocol to configure the memory in order to support the peripheral device from amongst the plurality that is coupled to the plurality of interconnection pads (*Fig. 2, element 206, RAM is used as swap space for processor, the protocol conversion engine utilizes the processor and hence the RAM*).

9. Per claim 5, Volftsun combined with Henderson discloses claim 2, Volftsun further disclosing the state machine includes a programmable routing and mapping scheme that allows the state machine to communicate with more than one peripheral device that is coupled to the plurality of interconnection pads (*Fig. 4, each state machine is shown to support and interoperate a plurality of different devices operating over one of the protocol adapters*).

10. Per claims 6 and 7, Volftsun combined with Henderson discloses claim 2, Volftsun further disclosing various conditions the state machine is subjected to (*Fig. 10+*) which may occupy different part of the RAM. Furthermore, use of tri-state buffers is well-known in the art for I/O pads for I/O control purposes.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patents and patent related publications are cited in the Notice of References Cited (Form PTO-892) attached to this action to further show the state of the art with respect to time division multiplexing a plurality of channels that may operate under different protocols.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2182

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASC
07/06/2007

Alan S. Elia
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